Name _____ Date _____
Period _____

Graphing Calculator Scavenger Hunt

1. Press [2nd] [+] [ENTER] What is the ID# of your calculator? _____

2. For help, what website can you visit? _____

3. What happens to the screen when you push [2nd] [▲] over and over? [2nd] [▼] over and over?
_____

4. [^] is called the "caret" button, and is used to raise a number to a power. Find 6^5 = _____.
To square a number use [x^2] What is 56^2? _____ To cube a number, press [MATH] and select option 3. What is 36^3? _____

5. Press [2nd] [Y=] to access the STAT PLOTS menu, how many stat plots are there? _____
Which option turns the stat plots off? _____

6. Press [STAT] which option will sort data in ascending order? What do you think will happen if option 3 is selected? _____

7. What letter of the alphabet is located above [÷]? _____

8. To get the calculator to solve the following problem $2\{3 + 10/2 + 6^2 - (4 + 2)\}$, what do you do to get the { and } ? _____The answer to the problem is _____.

9. To solve a problem involving the area and/or circumference of a circle, which calculator key(s) would you most likely use? _____ (Hint: What color is the sun?)

10. Use your calculator to answer the following:
2 x 41.587 _____ 2578/4 _____ 369 + 578 _____

Now press [2nd] [ENTER] two times. What pops up on your screen? _____
Arrow down and change the 4 to a 2. What answer do you get? _____
How will this feature be helpful? _____

11. What happens when the [10^x] and [6] keys are pressed? _____

12. The [STO→] button stores numbers to variables. To evaluate the expression $\frac{2a+3b}{4-c}$, press [9] [STO→] [ALPHA] [MATH] [ENTER] to store the number 9 to A. Repeat this same process if B = 2 and C = 1, then evaluate the expression by typing in the expression $\frac{2a+3b}{4-c}$ and pressing [ENTER]. Is it faster just to substitute the values into the expression and solve the old-fashioned way with paper and pencil? _____
When might this feature come in handy?_____

13. Press 2nd 0 to access the calculator's catalogue. Scroll up, to access symbols. What is the first symbol? _____ What is the last symbol? _____

14. Press 2nd 0 to access the calculator's catalogue. An A appears in the top right corner of the screen. This means the calculator is in alphabetical mode. Press). What is the 5th entry in the L's? What do these letters stand for? _____

15. Press MATH, what do you think the first entry will do? _____
Now press CLEAR, then press 0 . 5 6 MATH and select option 1. What answer do you get? _____

16. Press 4 MATH, choose option 5, then press 1 6 and ENTER. What did this option do? _____

17. Which function allows you to send/receive data/programs? _____

18. Press Y= type in 2x - 1. Press ZOOM then select 6, press MODE, arrow to the bottom and arrow over to G-T and press ENTER. Now press GRAPH. What appears on the screen? _____
Press MODE and scroll down to Full and press ENTER to restore to full screen.

19. Press 5 ÷ ÷ 9 ENTER. Press 2 to go to the error. The cursor should be blinking on the second /, press DEL ENTER. What answer did you get? To convert this number to a fraction, press MATH ENTER

20. Enter this problem into the calculator and press ENTER. 2.4 x 3.7 = _____.
Now press MODE ▼ Float ▶ to 0 and press ENTER.
Now press 2nd Quit to return to the home screen and press 2nd ENTER and the original problem should appear on the screen, now press ENTER. What appears on the screen? _____ Think about this number in relation to the answer you got before.
What did the calculator do? _____
Repeat this same process except select 2 under the Float option. Return to the home screen, recall the original problem and press ENTER. What number appears on the screen? _____
What did the calculator do this time? _____

21. Enter $(-2)^2$ into the calculator, what answer did you get? _____Now enter -2^2 into the calculator, what answer did you get this time? _____Why do you think you got two different answers? _____Would $(-2)^3$ and -2^3 give you two different answers? Why or why not?_____

22. Press "MODE". Put your calculator in radian mode. Find sin20 =_____.
Now switch your calculator to degree mode. Find sin20_____.

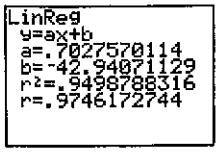
23. You're trying to simplify an expression and you enter 3+5*8= _____.
Then you realize that you forgot to put in parentheses! Use "2nd" then "DEL" to insert the missing parentheses. Make the equation look like (3+5)*8=_____.

24. Hit "2nd" then "0". This brings you to the _____. Hit "D" and find "DiagnosticOn". Press enter twice to turn on diagnostics. After you've done this, the calculator says _____.

25. Hit "STAT", then "ENTER" ("Edit" should be highlighted).

X (years since 1904)	Y (Olympic Pole Vault height)
0	137.5
4	146
20	161
28	165.25
44	169.25
60	185
84	237.25

1. Highlight L1, then hit "Clear" followed by the down arrow.
2. Highlight L2, then hit "Clear" followed by the down arrow. (You have now cleared both lists and are ready to work).
3. Enter the independent variable values (x-values) from the table into L1 and the dependent variable values (y-values) from the table into L2.
4. Hit "2nd" then "Y=". This will bring you to the stat plots page.
5. Select Plot 1 (hit enter), then turn the plot on (move the blinking cursor to ON and hit enter) and make sure that the "Xlist" is L1 and the "Ylist" is L2.
6. Adjust your window. Hit "ZOOM" then "9:ZoomStat". You should see a scatter plot of your data.
7. Hit "STAT", scroll over to "CALC", highlight "4: LinReg (ax+b)" and hit "Enter". Hit "Enter" again. A screen should pop up that looks like this (with different numbers).



8. Use the values of a and b to write the equation

   y=_____. a represents_____ and b

   represents_____. r=_____.

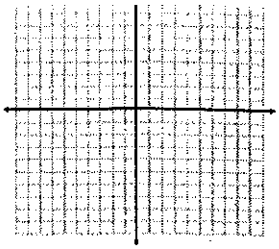
9. Now go back to "STAT" then "CALC" and choose "5:QuadReg". Write the

   quadratic equation that fits the data y=_____.

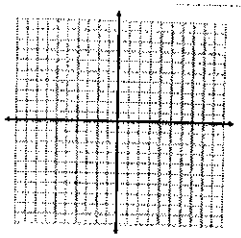
   r^2=_____.

26. Use "MATH" then "4: $\sqrt[3]{\ }$ ". $\sqrt[3]{148}$ =_____.

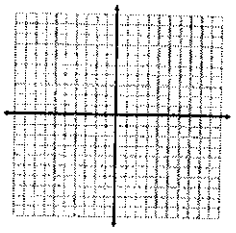
27. To find $\sqrt[6]{250}$, press "6", then "MATH", then "5: $\sqrt[x]{}$" and hit "ENTER". Put in 250 and hit "ENTER".
$\sqrt[6]{250}$=_____. $\sqrt[4]{325}$=_____.



28. Go to "Y=", scroll up to "Plot 1" and press "Enter" to turn it off. Then put in the equation $y = -3x^2 + 4$. Go left of Y= where you see \. Press enter 6 times until the \ is dotted. Press "ZOOM" and pick "6:ZStandard". Sketch the graph you see.
(∵)



29. Go back to "Y=" and change the \ to be greater than (press "ENTER" 3 times until you see ◥). Sketch what you see.



30. Go back to "Y=" and change the \ to be less than (press "ENTER" 1 more time until you see ◣). Sketch what you see.

31. What does the \ line to the left of each y= do?

_____

32. Go back to "Y=" and change the \ line back to normal (\). Now we're going to find the maximum, or vertex, of our graph. Hit "graph", then go to "2nd" "TRACE". This brings you to the _____ screen.

33. Choose "4: Maximum". Use your left arrow key to move the blinking dot to the left of center and press "ENTER". Then use the right arrow key to move the blinking dot to the right of center and press "ENTER". Move the blinking dot back toward the peak of the graph and hit "ENTER" again. It says the max is
x=_____ y=_____.

34. Go back to the calculate screen. (2nd TRACE). Choose "1: Value". Press "3" then "ENTER". It says the y-value at x=3 is _____. What does the value function do?

_____.

35. Go to "Y=" and enter the equation $y = 0.9x^2 - 15x + 20$. Go to "WINDOW" and change the min and max values for x and y until you can see the turning point (vertex, minimum) of the parabola. State the window you used.

Xmin=_____ Xmax=_____ Ymin=_____ Ymax=_____